

**Claims**

1. (Previously Presented) A method for providing an internal topology of a node within a network, comprising:

determining asymmetric connections between receiver transmitter pairs (RTPs) in a network node; the RTPs each comprising intra RTP connections between internal RTP components, the intra RTP connections having a higher speed than the asymmetric connections between the RTPs, wherein the internal RTP components comprise an optical receiver and an optical transmitter for interfacing with a wavelength division multiplex (WDM) system;

determining an intranode connectivity between the RTPs based on the asymmetric connections;

distributing a model of the node indicative of the intranode connectivity to a disparate node in a network with the node; and

using the model at the disparate node in determining a routing path through the network.

2. (Canceled)

3. (Previously Presented) The method of Claim 1, wherein the RTPs comprise lower speed interfaces to external nodes coupled to the network.

4. (Previously Presented) The method of Claim 1, further comprising determining all possible internode connectivity between the RTPs based on the asymmetric connections.

5. (Original) The method of Claim 1, further comprising distributing the model using opaque link state advertisements (LSAs).

6. (Original) The method of Claim 1, wherein the network comprises a private network.

7. (Previously Presented) The method of Claim 1, further comprising determining internode connectivity between the RTPs by assigning weights to the asymmetric connections based on their speed.

8. (Original) The method of Claim 1, further comprising:  
assigning a first weight for higher speed connections and a second higher weight for lower speed connections to generate weighted connections; and  
utilizing open shortest path first on the weighted connections at the disparate node to determine the routing path through the network.

9. (Previously Presented) A system for providing an internal topology of a node within a network, comprising:

means for determining asymmetric connections between receiver transmitter pairs (RTPs) in a network node; the RTPs each comprising intra RTP connections between internal RTP components, the intra RTP connections having a higher speed than the asymmetric connections between the RTPs, wherein the internal RTP components comprise an optical receiver and an optical transmitter for interfacing with a wavelength division multiplex (WDM) system;

means for determining an intranode connectivity between the RTPs based on the asymmetric connections;

means for distributing a model of the node indicative of the intranode connectivity to a disparate node in a network with the node; and

means for using the model at the disparate node in determining a routing path through the network.

10. (Canceled)

11. (Previously Presented) The system of Claim 9, wherein the RTPs comprise lower speed interfaces to external nodes coupled to the network.

12. (Previously Presented) The system of Claim 9, further comprising means for determining all possible internode connectivity between the RTPs based on the asymmetric connections.

13. (Original) The system of Claim 9, further comprising means for distributing the model using opaque link state advertisements (LSAs).

14. (Original) The system of Claim 9, wherein the network comprises a private network.

15. (Previously Presented) The system of Claim 9, further comprising means for determining internode connectivity between the RTPs by assigning weights to the asymmetric connections based on their speed.

16. (Original) The system of Claim 9, further comprising:  
means for assigning a first weight for higher speed connections and a second higher weight for lower speed connections to generate weighted connections; and  
means for utilizing open shortest path first on the weighted connections at the disparate node to determine the routing path through the network.

17. (Previously Presented) A system for providing an internal topology of a node within a network, comprising:

logic encoded in media; and

the logic operable to determine asymmetric connections between receiver transmitter pairs (RTPs) in a network node, the RTPs each comprising intra RTP connections between internal RTP components, the intra RTP connections having a higher speed than the asymmetric connections between the RTPs, wherein the internal RTP components comprise an optical receiver and an optical transmitter for interfacing with a wavelength division multiplex (WDM) system, the logic further operable to determine an intranode connectivity between the RTPs based on the asymmetric connections, to distribute a model of the node indicative of the intranode connectivity to a disparate node in a network with the node and to use the model at the disparate node in determining a routing path through the network.

18. (Canceled)

19. (Previously Presented) The system of Claim 17, wherein the RTPs comprise lower speed interfaces to external nodes coupled to the network.

20. (Previously Presented) The system of Claim 17, the logic further operable to determine all possible internode connectivity between the RTPs based on the asymmetric connections.

21. (Original) The system of Claim 17, the logic further operable to distribute the model using opaque link state advertisements (LSAs).

22. (Original) The system of Claim 17, wherein the network comprises a private network.

23. (Previously Presented) The system of Claim 17, the logic further operable to determine internode connectivity between the RTPs by assigning weights to the asymmetric connections based on their speed.

24. (Original) The system of Claim 17, the logic further operable to assign a first weight for higher speed connections and a second higher weight for lower speed connections to generate weighted connections and to utilize open shortest path first on the weighted connections at the disparate node to determine the routing path through the network.